

## Equation of a Circle

Date: \_\_\_\_\_

**EX:** Find an equation for the circle with centre (0, 0) and radius 5.

The equation of a circle having centre (0, 0) and radius  $r$  is  $x^2 + y^2 = r^2$ .

**EX:** Find the radius of a circle with center (0, 0) and the equation  $x^2 + y^2 = 81$ .

**EX:** Determine an equation and the radius for the circle that has its centre at the origin and passes through the point A(8, -6). Is the point (-9, 5) inside/outside or on the circle?

**EX:** The equation of a circle with center  $(0, 0)$  is  $x^2 + y^2 = 25$  . The points  $A(-3, 4)$  and  $B(5, 0)$  are the endpoints of chord  $AB$ .  $DE$  right bisects the chord  $AB$  at  $F$ . Verify that the center of the circle lies on the right bisector of chord  $AB$ .